
CHAPTER 20: Noise

In printing facilities, hearing loss is one of the most common occupational illnesses for press operators and bindery employees, and specifically for folder operators. During long print runs, operators may be subject to excess noise exposure. This noise may also pose a hazard for employees working near the source. ***MIOSHA's General Industry Occupational Health Standards – Occupational Noise Exposure*** requires you to develop a hearing conservation program when noise levels equal or exceed the action level for noise. The action level is 85 dBA as averaged over an eight-hour workshift. A hearing conservation program includes:



- Periodic monitoring of the work place to document sound levels in high noise areas and employee exposure to this noise;
- Audiometric testing of employees provided at no cost to the employee. The test must be conducted by a licensed or certified audiologist, otolaryngologist, physician, or appropriately trained or certified technician supervised by one of the previously mentioned persons. Baseline audiograms must be conducted within six months after the employee's first exposure at or above the action level. Baselines can be obtained within one year after initial exposure if mobile test vans are used. At least annually after obtaining the baseline audiogram, an employer must obtain a new audiogram for each employee exposed at or above the action level; and
- Provision of a variety of hearing protection for all employees exposed to noise at or above the action level. Mandatory use of hearing protection is required for all employees exposed to noise at or above the permissible exposure limit (permissible exposure limit - 90 dBA, eight-hour time-weighted average). Also, mandatory use of hearing protection is required for all employees who have not received a baseline audiogram within six months of initial exposure at or above the action level, or have experienced a standard threshold shift.
- Training of employees on the:
 - effects of noise on hearing;
 - purpose of hearing protectors;
 - advantages, disadvantages, and ability to reduce noise levels through use of various types of hearing protectors;
 - selection, fitting, use, and care of hearing protectors; and
 - purpose of audiometric testing and an explanation of test procedures.

A standard threshold shift means a change in the hearing threshold, relative to the baseline audiogram, of an average of 10 dB or more at 2,000, 3,000 and 4,000 Hz in either ear. If a standard threshold shift is caused by prolonged exposure to noise, it is recordable as an illness

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on the MIOSHA 200 log in column (7)(f). Any standard threshold shift caused by exposure to an instantaneous event would be recorded on the MIOSHA 200 log as an injury.

Additionally, if noise exposures exceed the permissible exposure limit, the employer must utilize all technologically available and feasible (i.e., economically, structurally, etc.) engineering and administrative controls to reduce and maintain noise exposures below the permissible limit. When purchasing new equipment, noise control measures should be considered and addressed prior to installation. Noise control measures include isolating vibration sources, insulating surrounding walls with sound-absorbing material, and enclosing equipment. If these controls do not reduce noise exposures below the permissible exposure limit, hearing protection must also be provided to and be used by exposed employees.